ACC NR: AP6035676

of an alkali or an organic base. These esters are used as herbicides to combat Avena fatua in wheat before or after the wheat seedlings appear. [W.A. 50]

SUB CODE: 07,06/SUBM DATE: 17Oct63

Card 2/2

ACC NR: AP6025390 SOURCE CODE: UR/0366/66/002/007/1196/1199

AUTHOR: Volodkovich, S. D.; Liberman, G. I.; Mel'nikov, N. N.; Sokolova, Ye. M.

ORG: All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchit rasteniy)

TITLE: Organic insectofungicides. XCVIII. Synthesis of some trichloroalkyl- and dichloroalkenyldithiocarbamates

SOURCE: Zhurnal organicheskoy khimii, v. 2, no. 7, 1966, 1196-1199

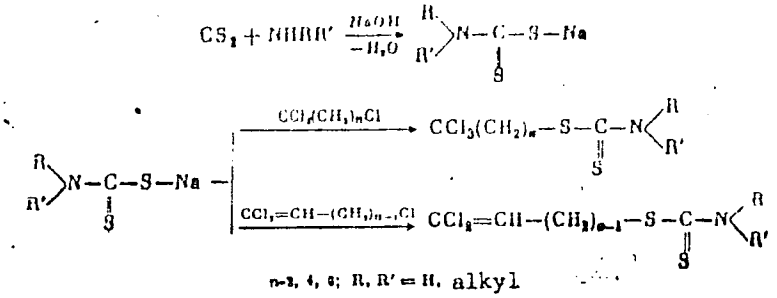
TOPIC TAGS: insectofungicide, dithiocarbamate ester, chloroderivate, INSECTICIDE, PESTICIDE

ABSTRACT:

In a search for new pesticides, the following previously unreported trichloroalkyl and dichloroalkenyl thiocarbamates (shown in the table) were obtained according to the two-stage reaction:

Card 1/4 UDC: 542.955.2 : 547.5

ACC NR: AP6025390



$$CS_2 + NHRR' \xrightarrow[-H_2O]{NaOH} \underset{R'}{\overset{R}{\rangle}}N-\overset{\overset{S}{\|}}{C}-S-Na$$

$$\underset{R'}{\overset{R}{\rangle}}N-\overset{\overset{S}{\|}}{C}-S-Na \xrightarrow{CCl_3(CH_2)_nCl} CCl_3(CH_2)_n-S-\overset{\overset{S}{\|}}{C}-N\underset{R'}{\overset{R}{\langle}}$$

$$\underset{R'}{\overset{R}{\rangle}}N-\overset{\overset{S}{\|}}{C}-S-Na \xrightarrow{CCl_2=CH-(CH_2)_{n-1}Cl} CCl_2=CH-(CH_2)_{n-1}-S-\overset{\overset{S}{\|}}{C}-N\underset{R'}{\overset{R}{\langle}}$$

n=3, 4, 6; R, R' = H, alkyl

These new compounds showed low pesticidal activity.

Card 2/4

ACC NR: AP6025390

Table. 1

No.	Compound	mp or bp (p in mm)	n_D^{20}	d_4^{20}	MR_D Found	MR_D Calculated	Yield (in %)	Found % Cl	Found % S	Formula	Calculated % Cl	Calculated % S
1	$(CH_3)_2N-\overset{\overset{S}{\|}}{C}-SCH_2(CH_2)_3CCl_3$	53—63.5°	—	—	—	—	68	26.43	21.56	$C_6H_{14}Cl_3NS_2$	26.16	21.73
2	$(CH_3)_2N-\overset{\overset{S}{\|}}{C}-S-CH_2(CH_2)_3CH=CCl_2$	160 (0.65)	1.5945	1.2803	68.37	68.70	62	27.83	24.24	$C_8H_{13}Cl_2NS_2$	27.51	24.60
3	$(C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-CH_2CH_2CCl_3$	82—83	—	—	—	—	40	26.48	21.16	$C_6H_{12}Cl_3NS_2$	26.13	21.75
4	$(C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-CH_2-CH=CCl_2$	82—83	—	—	—	—	74	28.11	23.77	$C_6H_{11}Cl_2NS_2$	27.51	24.60
5	$(C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_4CCl_3$	42—44	—	—	—	—	53	32.24	20.17	$C_{10}H_{18}Cl_3NS_2$	33.02	19.87
6	$(C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_3CH=CCl_2$	148—150 (0.18)	1.5756	1.2088	78.17	78.02	40	24.47	22.43	$C_{10}H_{17}Cl_2NS_2$	24.82	22.27
7	$(Iso\text{-}C_3H_7)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_4CCl_3$	102—105 (0.85)	1.5628	1.2162	93.32	92.81	22	29.70	19.24	$C_{12}H_{22}Cl_3NS_2$	30.28	18.80
8	$(IsoC_3H_7)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_3CH=CCl_2$	168—170 (0.15)	1.5054	1.1723	87.20	87.29	28	22.40	21.09	$C_{12}H_{21}Cl_2NS_2$	22.61	20.40

Card 3/4

ACC NR: AP6025390

Table. 1 (cont.)

No.	Compound	mp or bp (p in mm)	n_D^{20}	d_4^{20}	MR Found	MR Calculated	Yield (in %)	Found % Cl	Found % S	Formula	Calculated % Cl	Calculated % S
9	$(iso\text{-}C_3H_7)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_6CCl_3$	192—195 (0.55)	1.5485	1.1777	101.93	101.90	33	28.32	16.82	$C_{14}H_{26}Cl_3NS_2$	28.17	16.93
10	$(iso\text{-}C_3H_7)_2N-\overset{\overset{S}{\|}}{C}-S-(CH_2)_6CH=CCl_2$	178—180 (0.4)	1.5550	1.1429	96.05	96.59	45	20.82	16.47	$C_{14}H_{25}Cl_2NS_2$	20.70	16.71
11	$CH_3NH-\overset{\overset{S}{\|}}{C}-S-(CH_2)_4CCl_3$	58—62	—	—	—	—	15	38.50	22.45	$C_7H_{12}Cl_3NS_2$	37.86	22.81
12	$iso\text{-}C_3H_7NH-\overset{\overset{S}{\|}}{C}-S-(CH_2)_4CCl_3$	70—71	—	—	—	—	22	—	20.18	$C_9H_{16}Cl_3NS_2$	—	20.73
13	$C_6H_5NH-\overset{\overset{S}{\|}}{C}-S-(CH_2)_4CCl_3$	125—128 (10)	1.5215	1.1739	83.52	83.12	54	23.03	19.66	$C_{12}H_{16}Cl_3NS_2$	23.02	19.63
14	$C_6H_5NH-\overset{\overset{S}{\|}}{C}-S-(CH_2)_2-CH=CCl_2$	180 (0.65)	1.5260	1.1320	77.41	77.61	20	—	22.43	$C_{20}H_{13}Cl_2NS$	—	23.37

Orig. art. has: 1 table and 1 formula. [W.A. 50; CBE No. 10]

SUB CODE: 07/ SUBM DATE: 21Jul65/ ORIG REF: 003/ OTH REF: 011/

Card 4/4

ACC NR: AP6033181 SOURCE CODE: UR/0079/66/036/010/1841/1843

AUTHOR: Mel'nikov, N. N.; Grapov, A. F.; Lebedeva, N. V.

ORG: All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: Organic insecticides. XCIX. O-arylmethyl- and chloromethylthiophosphonic acid chlorides

SOURCE: Zhurnal obshchey khimii, v. 36, no. 10, 1966, 1841-1843

TOPIC TAGS: insecticide, ~~arylmethylthiophosphonic~~ phosphonic acid, chloride, ~~chloromethylthiophosphonic~~ acid chloride, phenol

ABSTRACT: At 5—15°C in absolute ether in the presence of triethylamine, phenols react with equimolar amounts of dichlorides of methyl- and chloromethylthiophosphonic acids to form the corresponding arylmethyl- and chloromethylphosphonic acid chlorides:

$$RPSCl_2 + ArOH + (C_2H_5)_3N \longrightarrow RP(S)(OAr)Cl + (C_2H_5)_3N \cdot HCl$$

$R = CH_3, ClCH_2$.

In the case of the formation of 2,4,5-trichlorophenylmethylthiophosphonic acid chloride, the reaction is conducted at -5 to 5°C to avoid

Card 1/2 UDC: 661.718:632.95

ACC NR: AP6033181

R	R'	Yield (in %)	bp (p in mm)	n_D^{20}	d_4^{20}	MR Found	MR Calc'd	Found % Cl	Found % P	Found % S	Formula	Calc'd % Cl	Calc'd % P	Calc'd % S
CH_3	C_6H_5	47	81–82° (0.05)	1.5710	1.2710	53.14	52.70	16.75, 16.84	14.90, 15.04	15.40, 15.59	C_7H_8ClOPS **	17.15	14.99	15.51
CH_3	4-ClC_6H_4	46	100–101 (0.15)	1.5636	1.2326	58.16	57.12	—	13.78, 13.70	13.99, 13.66	$C_7H_7Cl_2OPS$	—	14.03	14.53
CH_3	2,4-$Cl_2C_6H_3$	40	105–111 (0.16)	1.5698	1.4642	63.46	63.24	37.96, 37.00	11.16, 11.11	11.91, 11.58	$C_7H_6Cl_3OPS$	38.61	11.24	11.64
CH_3	2,4,5-$Cl_3C_6H_2$	10	138–140 (0.17) T. mp 28.5–56° ***	—	—	—	—	—	—	10.52, 10.36	$C_7H_5Cl_4OPS$	—	—	10.24
$ClCH_2$	4-ClC_6H_4	65		1.5956	1.4729	63.62	63.24	—	11.27, 11.33	11.46, 11.41	$C_7H_6Cl_2OPS$	—	11.24	11.64
$ClCH_2$	2,4-$Cl_2C_6H_3$	44.2	122–123 (0.1)	1.6020	1.5740	67.50	67.11	45.22, 45.24	10.04, 10.37	10.32, 10.50	$C_7H_5Cl_3OPS$	45.75	9.99	10.34
$ClCH_2$	2,4,5-$Cl_3C_6H_2$	32	140.5–143 (0.17)	1.6126	1.6271	73.61	72.00	—	8.62, 9.17	9.00, 9.16	$C_7H_4Cl_4OPS$	—	8.99	9.31

the formation of bis(O-2,4,5-trichlorophenyl)methylthiophosphonate. The acid chlorides, whose composition and constants are given in the table, are used as starting materials in the preparation of insecticides. Orig. art. has: 1 table. [W.A. 50]

SUB CODE: 06,07/ SUBM DATE: 06Sep65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

ACC NR: AP6027905 SOURCE CODE: UR/0064/66/000/008/0009/0012

AUTHOR: Mel'nikov, N. N.; Bezobrazov, Yu. N.; Trunov, P. P.; Sokolova, Ye. M.; Nayanov, L. D.; Burdakova, A. P.; Balashova, T. V.

ORG: none

TITLE: Preparation of zineb by a one-stage method

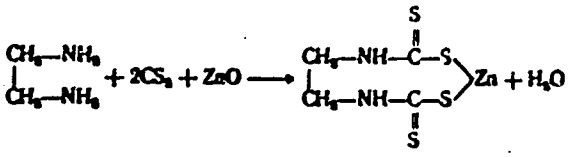
SOURCE: Khimicheskaya promyshlennost', no. 8, 1966, 9-12

TOPIC TAGS: fungicide, zineb ~~preparation~~, ZINC COMPOUND, CHEMICAL PRODUCTION

ABSTRACT: Zineb, [ethylenebis(dithiocarbamato)] zinc, a most effective fungicide but non-toxic for mammals, is produced in large amounts. To select an economical method for commercial production of zineb, various known methods of its preparation are reviewed and compared. It is shown that the previously described one-stage method, involving the reaction (USSR patent, No. 144470, 1961, published in 1962):

Card 1/2 UDC: 661.7:547.496.2'313.2'147-38

ACC NR: AP6027905



and later modified by using an NH_3 solution to decrease the losses of ethylenediamine (USSR patent, No. 161728, 1962, published 1964) is recommended as the most economical method of commercial production of zineb. [PS]

[WA-50; CBE No. 14]

SUB CODE: 07,06/SUBM DATE: none / ORIG REF: 003/ OTH REF: 008

Card 2/2

ACC NR: AP6029025 SOURCE CODE: UR/0413/66/000/014/0025/0025

INVENTOR: Mandel'baum, Ya. A.; Abramova, G. L.; Golovleva, L. M.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of alkylamides of O-alkylchlorothiophosphoric acid. 16 Class 12, No. 183753 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 25

TOPIC TAGS: insecticide, ~~alkylchlorothiophosphoric acid amide~~ phosphoric acid, organic amide

ABSTRACT: To simplify the process of the preparation of alkylamides of O-alkylchlorothiophosphoric acid by the treatment of alkyl dichlorophosphates with alkylamines at temperatures ranging from -5 to -10°C, with subsequent distillation, the process is carried out in the presence of an aqueous alkali. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07

ACC NR: AP6031057 (N) SOURCE CODE: UR/0394/66/004/009/0051/0054

AUTHOR: Bakumenko, L. A.; Lebedeva, N. V.; Razvodovskaya, L. V.; Grapov, A. F.; Mel'nikov, N. N.

ORG: All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: Synthesis and herbicidal activity of amido esters and diamides of methyl- and chloromethylphosphonic acids

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 9. 1966, 51-54

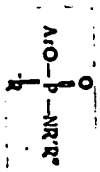
TOPIC TAGS: ~~herbicide, amido phosphonate, methyl~~phosphonic acid, ~~H~~amide, WEEDKILLER, ESTER, AMIDE, TOXICOLOGY

ABSTRACT: Herbicidal activity of the previously obtained amido esters and diamides of methyl- and chloromethylphosphonic acids was studied under laboratory conditions. The results are given in Tables 1 and 2. Experiments with white mice showed that amido esters of methylphosphonic acid are highly toxic for mammals, as shown in Table 3.

Card 1/5 UDC: 632.954+542.91

ACC NR: AP6031057

Table 1. Properties and herbicidal activity of amido esters of methyl- and chloromethylphosphonic acids



Compound	Ar	R	R'	R"	bp in °C/p or mp in °C
I	2-ClC$_6$H$_4$	CH$_3$	H	C$_2$H$_5$	148/0.3
II	2-ClC$_6$H$_4$	CH$_3$	H	iso-C$_3$H$_7$	74—75.5
III	2-ClC$_6$H$_4$	CH$_3$	H	sec-C$_4$H$_9$	49.5—51
IV	3-ClC$_6$H$_4$	CH$_3$	H	CH$_3$	142—142.5/0.17
V	3-ClC$_6$H$_4$	CH$_3$	H	C$_2$H$_5$	133—135/0.15
VI	3-ClC$_6$H$_4$	CH$_3$	H	iso-C$_3$H$_7$	128—130/0.1
VII	3-ClC$_6$H$_4$	CH$_3$	H	C$_4$H$_9$	162/0.29
VIII	3-ClC$_6$H$_4$	CH$_3$	H	sec-C$_4$H$_9$	139—142/0.13
IX	3-ClC$_6$H$_4$	CH$_3$	H	tert-C$_4$H$_9$	137—138/0.28
X	3-ClC$_6$H$_4$	CH$_3$	H	C$_4$H$_9$	138/0.31
XI	4-ClC$_6$H$_4$	CH$_3$	H	CH$_3$	60—61
XII	4-ClC$_6$H$_4$	CH$_3$	H	C$_2$H$_5$	51—53.5
XIII	4-ClC$_6$H$_4$	CH$_3$	H	iso-C$_3$H$_7$	92—93
XIV	4-ClC$_6$H$_4$	CH$_3$	H	C$_3$H$_7$	142—143/0.15
XV	4-ClC$_6$H$_4$	CH$_3$	CH$_3$	CH$_3$	114/0.17
XVI	4-ClC$_6$H$_4$	C$_2$H$_5$	H	C$_2$H$_5$	122—123/0.2
XVII	2,4-Cl$_2$C$_6$H$_3$	CH$_3$	H	C$_2$H$_5$	136—137—0.3
XVIII	2,4,5-Cl$_3$C$_6$H$_2$	CH$_3$	H	C$_2$H$_5$	105—108
XIX	2,4,5-Cl$_3$C$_6$H$_2$	CH$_3$	H	CH$_3$	47—48
XX	C$_6$H$_5$	CH$_3$	H	CH$_3$	139.5—151.5
XXI	C$_6$C$_5$	CH$_3$	H	C$_2$H$_5$	95—96
XXII	C$_6$H$_5$	CH$_3$	H	C$_2$H$_5$	41—42.5
XXIII	C$_6$H$_5$	CH$_3$	H	C$_3$H$_7$	113—114/0.13
XXIV	4-ClC$_6$H$_4$	CH$_3$	H	CH$_3$	46.5—48
XXV	4-ClC$_6$H$_4$	CH$_3$	H	C$_2$H$_5$	51—53
XXVI	4-ClC$_6$H$_4$	CH$_3$	H	iso-C$_3$H$_7$	113.5—114.5
XXVII	4-ClC$_6$H$_4$	CH$_3$	H	C$_4$H$_9$	44.5—47
XXVIII	4-ClC$_6$H$_4$	CH$_3$	H	sec-C$_4$H$_9$	89.5—91
XXIX	4-ClC$_6$H$_4$	CH$_3$	H	iso-C$_5$H$_{11}$	144—145

Card 2/5

Table 1 cont.

n_D^{25}	d_4^{25}	Concentration (mg/l) causing 50% of growth retardation							
		Wheat		Millet		Radish		Vetch	
		Sprouts	Roots	Sprouts	Roots	Sprouts	Roots	Sprouts	Roots
1,5298	1,2610	>150	>150	>150	>150	75	1,5	>150	45
—	—	>150	135	>150	>150	15	1,5	>150	75
—	—	>150	90	>150	>150	15	1,5	>150	75
1,5331	1,2856	120	60	60	45	15	3	150	13,5
1,5209	1,2426	>150	75	60	30	10,5	3	60	10,5
1,5190	1,1991	>150	105	105	60	13,5	1,5	60	45
1,5165	1,1763	75	37,5	15	7,5	7,5	1,5	60	6
1,5162	1,1973	120	60	90	37,5	10,5	0,15	120	12
1,5142	1,1835	—	—	—	—	—	—	—	—
1,5131	1,1726	—	—	—	—	—	—	—	—
—	—	105	38	120	60	15	13	135	60
—	—	150	150	—	—	75	12	>150	120
—	—	150	150	—	—	45	10,5	150	50
1,5191	1,1838	150	150	—	—	15	10,5	>150	60
1,5252	1,2386	135	38	45	45	38	15	105	45
1,5162	1,1775	150	60	90	45	13,5	4	60	13,5
1,5288	1,2558	>150	52	68	68	13,5	1	150	75
—	—	>150	38	75	38	13,5	11	>150	150
—	—	120	60	90	75	120	75	>150	135
—	—	105	38	—	—	105	30	60	9
—	—	>150	60	120	135	>150	>150	>150	>150
—	—	—	—	—	—	—	—	—	—
1,5180	1,2003	—	—	—	—	—	—	—	—
—	—	>[illegible]	52	38	38	15	3	>150	60
—	—	>150	68	52,5	45	3,6	1,5	60	14
—	—	>150	75	75	75	9	2,5	150	68
—	—	>150	82	37,5	7,5	3,8	1	45	11
—	—	>150	38	38	30	15	3	45	9
—	—	>105	75	37,5	30	>150	>150	>150	45

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001033

ACC NR: AP6031057

Table 2. Properties and herbicidal activity of diamides of methylphosphonic acid

$H_3C-P(=O)(NR)-NHAr$

Compound	Ar	R	mp in °C	Concentration (mg/l) causing 50% of growth retardation									
				Wheat		Oats		Millet		Radish		Vetch	
				Sprouts	Roots	Sprouts	Roots	Sprouts	Roots	Sprouts	Roots	Sprouts	Roots
1	C_6H_5	CH_3	74—75	—	—	—	—	—	—	—	—	—	—
2	C_6H_4Cl-м	CH_3	124—125	>150	>150	>150	135	120	37,5	>150	>150	>150	105
3	C_6H_4Cl-п	CH_3	158—160	>150	150	>150	60	97,5	97,5	>150	>150	135	120
4	$C_6H_4CH_3$-м	CH_3	86—88	—	—	—	—	—	—	—	—	—	—
5	$C_6H_4CH_3$-п	CH_3	139—141	—	—	—	—	—	—	—	—	—	—
6	C_6H_5	C_2H_5	78—79	>150	150	75	75	>150	>150	>150	>150	>150	30
7	C_6H_4Cl-о	C_2H_5	84—85	150	37,5	>150	75	>150	>150	135	135	120	>150
8	C_6H_4Cl-м	C_2H_5	105,5—106,5	>150	75	>150	37,5	>150	>150	>150	>150	>150	>150
9	C_6H_4Cl-п	C_2H_5	114—114,5	>150	37,5	>150	30	>150	>150	135	120	>150	37,5
10	$C_6H_4CH_3$-о	C_2H_5	58—59,5	—	—	—	—	—	—	—	—	—	—
11	$C_6H_4CH_3$-м	C_2H_5	59—60	—	—	—	—	—	—	—	—	—	—
12	$C_6H_4CH_3$-п	C_2H_5	137—138,5	>150	>150	>150	120	>150	>150	>150	>150	>150	150
13	$C_6H_4NO_2$-п	C_2H_5	118—119	>150	>150	>150	>150	>150	>150	>150	75	>150	>150
14	$C_6H_4O_2C_2H_5$-п	C_2H_5	93,5—95,5	>150	135	120	90	150	>150	>150	75	150	150
15	$C_6H_4OCH_3$-п	C_2H_5	95,5—97	—	—	—	—	—	—	—	—	—	—

Card 4/5

ACC NR: AP6031057

Table 3. Toxicity (mg/kg) of some compounds with respect to white mic

Compound no. in Table 1	LD_{100}	LD_{50}	Minimum toxic dose
IV	50	25	12.5
XVI	100	75	25.0

The authors thank Professor V. I. Vashkov for investigating the toxicity of the preparations for mammals and M. I. Gagarinaya for studying the effect of the preparations on Hill's reaction. Orig. art. has: 3 tables

[WA-50; CBE No. 14]
[PS]

SUB CODE: 07/ SUBM DATE: 30May66/ ORIG REF: 007

Card 5/5

ACC NR: AP6035827 (A,N) SOURCE CODE: UR/0413/66/000/020/0035/0035

INVENTOR: Mel'nikov, N. N.; Khaskin, B. A.; Petruchenko, N. B.

ORG: none

TITLE: Preparation of dialkylaminotrialkylphosphonium thiophosphates. Class 12, No. 187011 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 35

TOPIC TAGS: organic phosphorus compound, phosphoric acid, ester, amino ester

ABSTRACT: To obtain physiologically active compounds, dialkylaminotrialkylphosphonium thiophosphates, dialkylamidodialkylphosphines are treated with thiophosphoric esters. [PS]

[WA-50; CBE No. 14]

SUB CODE: 07/ SUBM DATE: 25Dec65

Card 1/1 UDC: 547.26'118.07

ACC NR: AP6035828 (A, N) SOURCE CODE: UR/0413/66/000/020/0036/0036

INVENTOR: Mel'nikov, N. N.; Grapov, A. F.; Lebedeva, N. V.; Daragan, N. K.

ORG: none

TITLE: Preparation of N-alkoxycarbonylalkylamidoalkylthiophosphonic acid chlorides. Class 12, No. 187015 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 36

TOPIC TAGS: fungicide, phosphonic acid, chloride

ABSTRACT: To obtain N-alkoxycarbonylalkylamidoalkylthiophosphonic acid chlorides, intermediates in the preparation of fungicides, alkylthiophosphonic acid dichlorides are treated with esters of α- and β-aminoacids in the presence of tertiary amines, as the acceptors of HCl. [WA-50; CBE No. 14] [PS]

SUB CODE: 07/ SUBM DATE: 31Dec65

Card 1/1 UDC: 547.233.2'122'118'-312'113.07

ACC NR: AP6030548 SOURCE CODE: UR/0413/66/000/016/0029/0029

INVENTOR: Baskakov, Yu. A.; Svirskaya, P. I.; Mel'nikov, N. N.; Shvindlerman, G. S.; Vsevolozhskaya, N. B.; Stonov, L. D.; Bakumenko, L A.

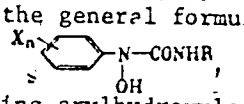
ORG: none

TITLE: Preparation of N-hydroxyurea derivatives. Class 12, No. 184835 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 29

TOPIC TAGS: herbicide, hydroxyurea derivative, alkyl isocyanate, alkylcarbamoyl chloride, WEED KILLER, UREA COMPOUND

ABSTRACT: In the proposed method for the preparation of herbicides, derivatives of N-hydroxyurea of the general formula:



are obtained by treating arylhydroxylamines with alkyl isocyanates or with alkylcarbamyl chlorides. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 28Jul64/

Card 1/1 UDC: 547.495.2.07
632.954.2

MEL'NIKOV, N. P.; OSTROUMOV, G. A.; SHTEYNBERG, A. A.

Some characteristics of the electric breakdown of electrolytes.
Dokl. AN SSSR 147 no.4:822-825 D '62.
(MIRA 16:1)

1. Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova.
Predstavleno akademikom M. A. Leontovichem.

(Breakdown, Electric) (Electrolytes)

MEL'NIKOV, N.P.; OSTROUMOV, G.A.; SHTEYNBERG, A.A.

Adapter for an OK-17M oscillograph. Prib. i tekh. eksp. 9 no.1:136-137 Ja-F '64. (MIRA 17:4)

1. Leningradskiy gosudarstvennyy universitet.

ACCESSION NR: AP4035709 S/0057/64/034/005/0949/0951

AUTHOR: Mel'nikov, N.P.; Ostroumov, G.A.; Stoyak, M.Yu.

TITLE: Development of electric breakdown in aqueous sodium chloride solutions

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.5, 1964, 949-951

TOPIC TAGS: electric breakdown, sodium chloride

ABSTRACT: This paper reports a continuation of earlier work on electric breakdown in sodium chloride solutions (N.P.Mel'nikov, G.A.Ostroumov and A.A.Shteinberg,DAN SSSR,147,4,1962; N.P.Mel'nikov, G.A.Ostroumov and M.Yu.Stoyak,Ibid.148,5,1963). The 12 to 13 kV discharges (normally, positive point to negative plane) took place between electrodes separated by 5 mm and immersed in the solution. The discharges were photographed at 2.5×10^6 frames/sec with back illumination provided by an auxiliary spark. Continuous time resolved photographs were also obtained of limited portions of the discharge. In low concentration solutions the discharge begins with the development of dark branching filaments which propagate from the positive point electrode with the velocity 1.2×10^5 cm/sec. When a filament reaches the negative plane a luminous plasma discharge propagates backward along it with much greater velocity,

Card 1/2

ACCESSION NR: AP4035709

covering the 5 mm gap in a time much shorter than the 0.4 microsec between successive photographs. The luminous discharge increases for a time in width and intensity. A sequence of 24 photographs is reproduced showing this development. From the continous time scan photographs it can be seen that the luminous discharge fills its expanding channel for 3 or 4 microsec, after which the luminous discharge begins to contract, while the channel continues to expand at a decreasing rate. In more concentrated solutions the initial filaments propagated somewhat more rapidly and were luminous. In very concentrated solutions the filaments were not formed and no plasma discharge between the metal electrodes occurred. In this case only a small region about the positive point electrode was luminous. This luminosity is ascribed to an arc discharge within a bubble formed at the electrode by thermal effects. Orig.art. has: 1 formula and 4 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im.A.A.Zhdanova (Leningrad State University)

SUBMITTED: 25Apr63 DATE ACQ: 20May64 ENCL: 00

SUB CODE: EM NR REF SOV: 002 OTHER: 000

Card 2/2

McLNikov, N.P.

A simplified method for production of 2-furaldehyde in wood-hydrolysis plants. N. P. McLikov, Yu. A. Tsirlin, and K. A. Kever. *Gidrolis. i Lesokhim. Prom.* 8, No. 2, 10-12(1955).—Fractional condensation of the vapor from hydrolysis of wood gave a preheater condensate contg. 0.3% furaldehyde (I) 0.1% MeOH, and 0.15% AcOH. The compn. of the main condensate contained 11.0% I, 15.2% MeOH, and 63.5% AcOH in the 1st condenser, and 89.0%, 84.8%, and 36.5%, resp., in the 2nd condenser. Because of the low AcOH content in the latter no neutralizing agents had to be added. These expts. led to the design of a continuous rectification column consisting of 2 preheaters, and an exhausting column. Aq. I is collected at the middle, aq. MeOH at the top of the column. J. Jurecic

(2)

NEL'NIKOV, N.P., kandidat tekhnicheskikh nauk

Answers to readers' inquiries: Caramelization in pipe systems used in evaporators. Gidroliz. i lesokhim. prom. 8 no.3:30 '55.
(Pipes, Deposits in) (MLRA 8:9)

CHALOV, N.V.; MEL'NIKOV, N.P.; TSIRLIN, Yu.A.; POSTNIKOVA, N.S.

Concentration of furfurol in the vapors from hydrolyzate evaporation without expending heat. Gidroliz. i lesokhim.prom. 9 no.6:8-10 '56. (MLRA 9:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Furaldehyde) (Hydrolysis)

Mel'n, Kov, N.P.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26106

Author : N.P. Mel'nikov, Yu.A. Tsirlin
Title : Equilibrium Vapor - Liquid at Partial Condensation in System Methanol - Furfurole - Water - Acetic Acid.

Orig Pub : Zh. prikl. khimii, 1956, 29, No 8, 1159-1164

Abstract : The composition of the liquid and vapor phases at the partial condensation of binary systems furfurole (I) - water(II) and methanol (III) - II and the quaternary system I - II - III - acetic acid (IV) was studied. The installation used for the two-step condensation of water vapor containing insignificant amounts of I, III and IV is described. The experiments with the system I - II were carried out at the concentration of I in the initial vapor of from 0.13 to 0.40% and from 1.5 to 2%. The concentration of III in the vapor of the system II - III varied within the limits from 0.08 to 0.16%. The initial vapor of the system I - II - III - IV contained (in % by weight): (I - from 0.2 to 0.4; III - from 0.11 to 0.24; IV - from 0.15 to 0.20. Balance sheets of materials for the

Card : 1/2

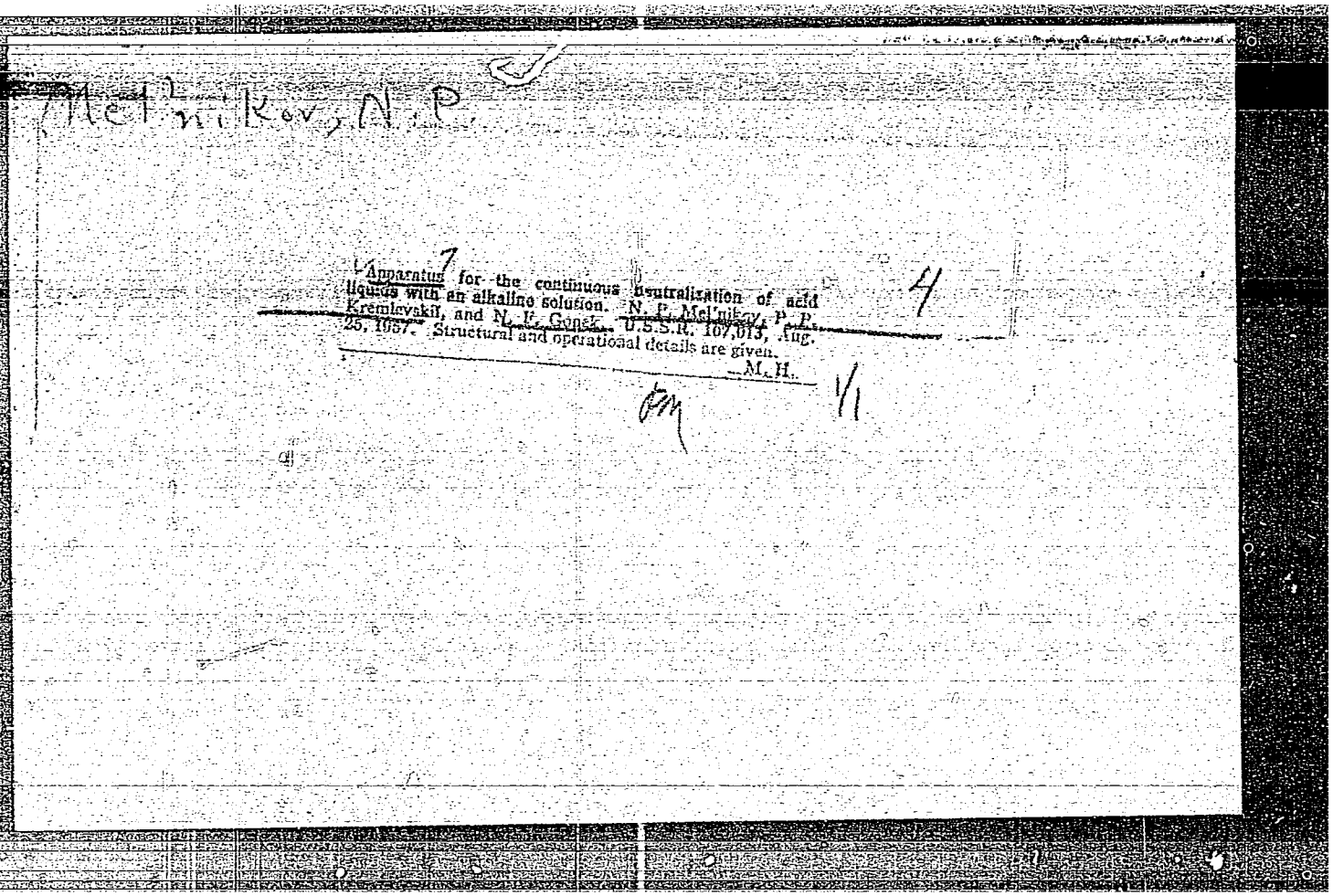
MEL'NIKOV, N.P.; TSIRLIN, Yu.A.

Liquid-vapor equilibrium at increased pressure for the system furfurole-water. Zhur.prikl.khim. 29 no.9:1456-1459 S '56. (MLRA 9:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizmoy i sul'fitnosportovoy promyshlennosti.
(Phase rule and equilibrium) (Furaldehyde)

MEL'NIKOV, N.P.

The vapor-liquid equilibrium in the water-formic acid system. N. P. Mel'nikov and Yu. A. Tsirlin (Inst. Hydrolysis and Sulfite Alcohol Ind., Leningrad). *Zhur. Fiz. Khim.* 30, 2290–3(1956).—The compn. of the azeotropic mixt. and of the equil. phases of the binary H_2O-HCOOH mixt. was detd. at 760 mm. pressure for systems contg. 0.05–91 wt. % HCOOH. The azeotropic mixt. boils at 107.65° at 760 mm. pressure, and contains 74.5 wt. % HCOOH, which is 2.5% lower than previously reported. The HCOOH vaporization coeff. from dil. solns. is 0.470 and much lower than that of AcOH (0.75). W. M. Sternberg



Mel'nikov, N. P.

Apparatus for the continuous neutralization of acid liquids with an alkaline solution. N. P. Mel'nikov, P. P. Kremlevskii, and N. F. Gonser. U.S.S.R. 107,013, Aug. 25, 1957. Structural and operational details are given.

M. H.

MEL'NIKOV, N.P., kand.tekhn.nauk

Furfurole. Khim.nauka i prom. 2 no.4:425-431 '57. (MIRA 10:11)
(Furaldehyde)

MEL'NIKOV, N.P.; TRAVINA, K.A.

Obtaining hydrofuramide from furfural-containing condensates. Gidroliz. i lesokhim. prom. 11 no.3:8-10 '58. (MIRA 11:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Hydrofuramide) (Furaldehyde)

S/054/62/000/002/012/012
B117/B101

AUTHORS: Mel'nikov, N. P., Ostroumov, G. A., Shteynberg, A. A.

TITLE: Method of stabilizing spark discharges in water

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1962, 157 - 158

TEXT: The delay of breakdown in water or salt solutions, which follows statistical laws, was investigated, as well as its avoidance applying an electrolyte solution. Shock waves were excited by capacitor discharge in water, and the delays of the breakdown was recorded with an oscillograph. Experiments in tap water ($\sigma = 6 \cdot 10^{-5}$ ohm^{-1}·cm^{-1}; spark gap 1 mm) showed delays of about 1 - 5 μsec referred to the breakdown of air. Instead of using metal wire ("Exploding Wires". New York, 1959), rinsing of the lower electrode with a concentrated electrolyte solution, flowing out from the tubular upper electrode is proposed. Experiments with saturated sodium chloride solution revealed no delays in breakdown of the discharge space. Delays (shorter than those in fresh water) occurred in a 3.5% solution of sodium chloride solution in tap water without rinsing electrolyte. These

Card 1/2

S/054/62/000/002/012/012
B117/B101

Method of stabilizing spark...

disappeared on concentrated sodium chloride solution being added, and reappeared on supplying fresh water. Sometimes, no delay took place and the capacitor was discharged through the electrolyte. Similar results were obtained using concentrated solutions of other chemical compounds. The use of acids and bases proved to be unfavorable. Further investigations are necessary. There are 2 figures.

SUBMITTED: February 1, 1962

Card 2/2

S/020/62/147/004/013/027
B117/B186

AUTHORS: Mel'nikov, N. P., Ostroumov, G. A., Shteynberg, A. A.

TITLE: Some characteristics of the disruptive discharge in electrolytes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 4, 1962, 822-825

TEXT: As an addition to previous papers (Vestn. Leningradsk. univ. no. 10, 157 (1962)), the behavior of several electrolyte solutions under high voltage was studied over a wide range of concentration. This behavior was shown not to depend on the chemical composition of the electrolytes but only on their conductivity. Graphic representations of the behavior of electrolytes with a conductivity of $\sigma = 0.52 \cdot 10^{-4}$-0.74 $ohm^{-1} \cdot cm^{-1}$ and a discharge gap in liquid of 0.25-20 mm were studied by oscillographs. Three sections were distinguished: (I) Discharge is possible. A potential jump is clearly recognizable; its height decreases as the conductivity of the electrolyte increases. Larger electrode spacing causes a gradual increase in the delay of voltage drop after disruption of the air gap. (II) Aperiodic discharge: no disruption occurs. An increase in conductivity

Card 1/2

of the solution accelerates the exponential voltage drop. (III) Oscillating discharge: no disruption occurs. The decay of oscillating discharge decreases gradually as the conductivity of the solution increases and the electrode spacing in liquid decreases. The studies pointed to the following rules: Low conductivity of electrolyte requires that the average potential difference between neighboring anions and cations must exceed a certain minimum for a discharge to be possible. To ensure a thermal discharge, a certain minimum current density is required ($\sim$10 a/cm^2). There are 2 figures and 1 table.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: May 16, 1962, by M. A. Leontovich, Academician

SUBMITTED: May 15, 1962

MEL'NIKOV, M.P.; OSTROUMOV, G.A.; STOYAK, M.Yu.

Development of an electric discharge in aqueous electrolytes.
Dokl. AN SSSR 148 no.5:1057-1059 F '63. (MIRA 16:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Predstavleno akademikom M.A.Leontovichem.
(Electric discharges)

MEL'NIKOV, N.P.; TSIRLIN, Yu.A.; FEDOTOVA, S.A.; BOBOVNIKOV, B.M.; IVANOVA, E.K.

Continuous neutralization of furfurole-containing vapors. Gidroliz. i lesokhim. prom. 16 no.7:20-23 '63. (MIRA 16:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti (for Mel'nikov, TSirlin, Fedotova). 2. Andizhanskiy gidroliznyy zavod (for Bobovnikov, Ivanova).

MEL'NIKOV, N.P.; OSTROUMOV, G.A.; STOYAK, M. Yu.

Electric breakdown in aqueous solutions of sodium chloride.
Zhur. tekh. fiz. 34 no.5:949-951 My '64 (MIRA 17:8)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.

MEL'NIKOV, N. P.

USSR/Engineering - Construction work

Card : 1/1 Pub. 106 - 2/9

Authors : Mel'nikov, N. P., Recipient of Stalin Award

Title : The steel structures of the tall culture and science building in Warsaw, Poland

Periodical : Stroi. prom. 7, 6 - 12, July 1953

Abstract : Structural data of the main steel constructions of the culture and science building in Warsaw, Poland, built under sole supervision of Soviet Architects and Engineers. Drawings, diagrams; graph.

Institution : ...

Submitted : ...

MEL'NIKOV, N.P., kand. tekhn. nauk.

Economizing steel in using steel structures in Czechoslovakia.
Prom. stroi. 36 no.11:42-46 N '58. (MIRA 12:1)
(Czechoslovakia--Steel, Structural)

MEL'NIKOV, N.P., kand.tekhn.nauk

Actual performance of some types of thin-walled rods with closed shapes. Mat. po stal'. knostr. no.4:176-235 '59.
(MIRA 13:8)

(Torsion) (Steel, Structural)

MEL'NIKOV, N.P., kand.tekhn.nauk

Designing thick-walled cylincrical vessels subject to high pressures and temperatures. Mat.po stal'.konstr. no.5:32-119 '59. (MIRA 13:8)
(Pressure vessels) (Elastic plates and shells)

MEL'NIKOV, N.P., kand.tekhn.nauk

Calculating steel structures by the method of limited states. Prom.stroi. 37 no.2:39-44 F '59. (MIRA 12:3)

1. Gosudarstvennyy proyektnyy institut Proyektstal'konstruktsiya.
(Steel, Structural) (Strains and stresses)

VECHTOMOV, M.I., inzh.; KUDRYAVTSEV, V.A., inzh.; MALKES, D.A., inzh.; OSTROVSKIY, G.I.;POVERENNYY, L.D.;SUSHKOV, P.M., inzh.; TYULENEV, N.Z., inzh. Prinimali uchastiye: GALYAMOVA, N.S., inzh.; PUTEYEVA, N.P.; IZRAYLOVICH, Ye.A., inzh.; MARCHENKO, G.A., inzh.; MALYGINA, Z.S.; SOKOLOVA, Ye.A.; SOKOV, V.N., inzh.; TARASOVA, S.N.; TASHAYEV, A.L., inzh.; FILIMONOV, S.V.; DRALICH, K.F.,inzh., nauch. red.; NOVITCHENKO, K.M., inzh., nauchnyy red.; SIMAKOV, S.N., inzh., nauchnyy red.; FAKTOROVICH, Yu.A., kand. tekhn. nauk, nauchnyy red.; STUPIN, Ye.N., otv. red.; LUTOV, N.S., red.; IVANOV, V.S., red.; BAGUZOV, N.P., glav. red.; VOLCHEGORSKIY, M.S., zam. glav. red.; DOBRYNIN, S.N., red.; NAZAROV, I.A., red.; KOLESNIKOV, S.I., red.; MEL'NIKOV, N.P., red.; SUSNIKOV, A.A.,red.; STAROVEROV, I.G., red.; LYTKINA, L.S., red. izd-va; GORDEYEV, P.A., red. izd-va; OSENKO, L.M., tekhn. red.

[Handbook for the designer of industrial, residential, and public buildings and structures; organization of construction and execution of building and assembly operations. Industrial construction] Spravochnik proektirovshchika promyshlennykh, zhilykh i obshchestvennykh zdanii i sooruzhenii; organizatsiia stroitel'stva i proizvodstvo stroitel'no-montazhnykh rabot. Promyshlennoe stroitel'stvo. Pod red. P.M.Sushkova. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 372 p.
(MIRA 15:2)

(Industrial buildings)

PALLADIN, A.V., akademik; FEDORCHENKO, I.M., akademik; GULYY, M.F., akademik; BAKULIN, D.I.; MEL'NIKOV, N.P., kand.tekhn.nauk; OKERBLOM, N.O., prof., doktor tekhn.nauk; LYUBAVSKIY, K.V., prof. doktor tekhn.nauk, laureat Stalinskikh premiy; PORTNOY, N.D., kand.tekhn.nauk; TSYBAN', N.G.; KULIKOV, M.S., dotsent; AGRONOMOV, S.N., inzh.; POLYAKOV, V.A., inzh.; SHERSTYUK, V.N., inzh.

Congratulations on the publication of the issue no.100 of the "Avtomaticheskaia Svarka" journal. Avtom.svar. 14 no.7: 3-8 Jl '61. (MIRA 14:7)

1. Prezident AN USSR (for Palladin). 2. AN USSR, glavnyy uchenyy sekretar' AN USSR (for Fedorchenko). 3. AN USSR, predsedatel' redaktsionno-izdatel'skogo soveta AN USSR (for Gulyy). 4. Uchenyy sekretar' AN USSR (for Bakulin). 5. Direktor instituta "Proyektstal'konstruktsiya" (for Mel'nikov). 6. Predsedatel sektsii svarochnogo proizvodstva Tekhniko-ekonomicheskogo soveta Leningradskogo sovnarkhoza (for Okerblom). 7. Glavnyy svarshchik Uralvagonzavoda (for Portnoy). 8. Glavnyy inzh. zavoda im. Nosenko (for TSyban'). 9. Dal'nevostochnyy politekhnicheskiy institut im. V.V.Kuybysheva (for Kulikov). 10. Dal'zavod (for Agronomov, Polyakov). 11. Dal'nevostochnyy nauchno-issledovatel'skiy institut po stroitel'stvu (for Sherstyuk).

(Electric welding--Periodicals)

S/125/61/000/006/006/010
D040/D112

12300
18.1111

AUTHORS: Mel'nikov, N. P., Gladshteyn, L. I., Malyshev, B. D.

TITLE: On the problem of high-strength steel application for welded structures

PERIODICAL: Avtomaticheskaya svarka, no. 6, 1961, 47-55

TEXT: The article is a general position review with practical suggestions made in view of the growing amount of steel used for industrial structures. The weight of structures is an acute problem. The ultimate strength of 250 kg/mm^2 reached in steel used in the machine industry shows what can be done by selecting the optimum chemical composition. Already 350 kg/mm^2 has been reached in experiments. The most used structural steel in the USSR was until 1960 the НЛ-2 (NL-2) grade, called 15ХСНД (15KhSND) in ГОСТ 5058-57 (GOST 5058-57). It is now forbidden to use it for structures because of high cost and high nickel and copper content. A manganese grade, 14Г2 (14G2) recommended in 1958 by TsNIICHM, TsNIISK and "Proyektstal'konstruktsiya" is coming into use in places: Dnepropetrovskiy zavod metallokonstruktsiy im. Babushkina (Dnepropetrovsk Metal Structures Plant im. Babushkin)

Card 1/5

On the problem of high-strength steel ...

produced in 1960 blast furnace and recuperator casings as well as some other structures for the Novotul'skiy and the Magnitogorsk metallurgical plants, and the Chelyabinskiy zavod metallokonstruktsiy im. Ordzhonikidze (Chelyabinsk Metal Structures Plant im. Ordzhonikidze) used 700 tons of it for structures. A still cheaper silico-manganese steel, 15ГС (15GS), with the same properties as in the 14G2, will be available soon. But these two new grades cannot replace 15KhSND fully for they are not dependable for structures where strength is of critical importance. As nickel is scarce, 15KhSND ought to be produced at the Orsko-Khalilovskiy metallurgicheskiy kombinat (Orsk-Khalilovo Metallurgical Combine) from naturally alloyed ores. A promising replacement for 15KhSND is the МК (MK) or 10Г2СД (10G2SD), and М (M), or 09Г2ДТ (09G2DT) of the Zhdanovskiy metallurgicheskiy zavod (Zhdanov Metallurgical Plant); its applicability should be checked without delay. The authors recommend the use of foreign bainite with 0.5% Mo and 0.001-0.004% B, having a 40-90 kg/mm yield limit, and the revision of the GOST standard that sets narrow limits for thickness of structural low-alloy steel. Cold working is an effective means for raising strength of structural steel, but it is only very little used. It is pointed out that the yield limit of steel rises with increase of the degree of cold deformation, particularly of low-alloy

On the problem of high-strength steel ...

steel that assumes a bainite structure upon hardening. One example of deformation strengthening is found in the use of expanded pipes for gas pipelines. Cold stretching in sheet stretching machines suggested by N. D. Kuzema and A. V. Prokhorov (Ref. 4: "Stal'", no. 8, 1960) should be used in rolling shops. Deformation strengthening was not used for structur steel because of the fear that it would raise embrittlement. But is has been stated in experiments at "Proyektstal'konstruktsiya" that slight elongation of the outer fiber raised the yield limit in low-alloy steel by 3.8 - 6.4 kg/mm^2, reduced the elongation only 1.3 - 2.2%, did not change the ultimate tensile strenght and reduction of area, only insignificantly reduced the impact resistance. However, the critical brittleness point was slightly raised (by less than 20°C). In static tension tests deformation-strengthened specimens had high resistance to brittle rupture, and this shows that steel so strengthened can be used for static service structures. One more way to raise steel strenght is heat treatment. Institut kachestvennykh staley TsNIIChM (Institute of High Grade Steels of TsNIIChM) studied the problem in 1956-1957 in conjunction with "Proyektstal'konstruktsiya" and it was concluded that hardening raises the yield limit by 20-25%, which means that the volume of metal in structures can be cut 13-20%. The hardening coststs are low.

Card 3/5

On the problem of high-strength steel ...

The "T-1" steel grade used in the U.S. and Japan is mentioned as an example of effective economy and high strength, i.e. 63 kg/mm^2 yield limit. Another example is 96 kg/mm^2 yield limit steel for light-weight structures developed in Italy. It is necessary to improve the quality of low-alloy steel, develop new chemical compositions for economical and weldable high-strength steel, to use new methods for thermic and mechanical strengthening. Structure designs must have more elements under tension load. The last recommendation is for production engineers to find welding methods and types of joints that will not impair the strength of high-strength steel. There are 5 figures, 1 table and 10 references: 4 Soviet-bloc and 6 non-Soviet-bloc. The four latest references to English-language publications read: K. J. Irvine, F. B. Pickring, Low-carbon Bainitic Steels, "Journal of the Iron and Steel Institute", v. 187, pp 292-309, No. 4, 1957; J. M. Hodge, L. C. Bibber, Low-Alloy Steel for Pressure Vessels, "Iron and Steel", XII, No. 29, pp 551-555, 1956; Literature Survey of High-Strength Steels, "Welding Journal", May, No. 5, pp 251-255, 1954; L. C. Hollister, F. Asce, R. D. Sunbury, M. Asce, High-Strength Steels Show Economy for Bridges, "Civil Engineering", June, v. 30, No. 6, pp 60-63, 1960.

Card 4/5

22942

S/125/61/000/006/006/010
D040/D112

On the problem of high-strength steel ...

ASSOCIATION: GPI "Proyektstal'konstruktsiya" ("Proyektstal'konstruktsiya" State Planning Institute)

SUBMITTED: January 30, 1961

Card 5/5

X

MEL'NIKOV, N.P., kand. tekhn. nauk

[Materials on metal elements] Materialy po metallicheskim konstruktsiiam. Moskva, Gosstroiizdat. No.6. Pod red. N.F.Mel'nikova. 1962. 186 p. (MIRA 17:4)

1. Moscow Gosudarstvennyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov.

MEL'NIKOV, N.P., kand.tekhn.nauk

Theoretical and experimental determination of the concentration of stresses around openings in plates. Mat. po met. konstr. no.6:75-111 '62. (MIRA 15:12)
(Strains and stresses)

MEL'NIKOV, N.P., kand. tekhn. nauk

Brittle failure of steel in elements of steel structures. Mat. po met. konstr. no.7:22-43 '62. (MIRA 17:1)

MEL'NIKOV, N.P., kand.tekhn.nauk

Use of metal elements in France. Prom.stroi. 40 no.4:54-59 '62. (MIRA 15:5)
(Furnace--Construction industry)

MEL'NIKOV, N.P., kand.tekhn.nauk

Use of metal elements in France. Prom. stroi. 40 no.5:58-63 '62. (MIRA 15:5)
(France--Building materials)

AM4017084 BOOK EXPLOITATION S/

Mel'nikov, Nikolay Prokof'yevich

Construction forms and methods of designing structures of nuclear reactors (Konstruktivny*ye formy* i metody* rascheta konstruktsiy yaderny*kh reaktorov) Moscow, Gosatomizdat, 63. 0518 p. illus., biblio. Errata slip inserted. 2600 copies printed.

TOPIC TAGS: reactor, reactor shell, reactor shell strength, reactor shell design, reactor shell construction, reactor shell material

PURPOSE AND COVERAGE: The book analyzes problems connected with the construction of nuclear reactor shells and summarizes the status of the structural forms of these shells and their evolution, on the basis of a study of the main factors affecting shell form and certain mathematical relations. It deals with the theory of the structural form of reactors, the assembly of steel structures, and methods of their design. Strength analysis based on theoretical and

Card 1/3

AM4017084

experimental procedures is employed. The book is intended for designers of reactor structures.

TABLE OF CONTENTS [abridged]:

Card 2/3

AM4017084

SUB CODE: NS SUBMITTED: 08Jun63 NR REF SOV: 100

OTHER: 069 DATE ACQ: 20Dec63

Card 3/3

MEL'NIKOV, N.P., doktor tekhn. nauk

Use of structural elements in Italy. Prom. stroi. 40 [i.e. 41] no.6:50-56 Je '63. (MIRA 16:10)

MEL'NIKOV, N. P., doktor tekhn. nauk

Designing the main building of a powerful oxygen-blown converter plant. Prom stroi 41 no. 12:19-21 D '63. (MIRA 17:5)

ZELYATROV, V.N.; MEL'NIKOV, N.P.; ZUBKOVA, M.S., red.; SHEVCHENKO, T.N., tekhn. red.

[Selection of steel for metal construction elements; a manual for designers] Vybor stali dlia stroitel'nykh metallicheskikh konstruktsii; posobie dlia proektirovshchikov. Moskva, Stroiizdat, 1964. 97 p. (MIRA 17:3)

MEL'NIKOV, N.P., doktor tekhn.nauk

Basic problems in the development of welded structural metal elements. Mat. po met.konstr. no.3:3-55 '64.
(MIRA 18:5)

MEL'NIKOV, N.P., doktor tekhn. nauk

Design details for the main building of a superpowered open-hearth plant. Prom. stroi. 41 no.1:27-29 Ja '64. (MIRA 17:6)

MELNIKOV, Nikolay Prokof'yevich, doktor tekhn. nauk, prof.;
ZELYATHOV, V.N., inzh., nauchn. red.

[Development of metal constructions] Razvitie metallicheskikh konstruktsii. Moskva, Stroiizdat, 1965. 278 p.
(MIRA 18:7)

MEL'NIKOV, N.P., doktor tekhn. nauk, prof.

Thermal resistance and creep of steel structures. Mat. po met. konstr. no.9:39-78 '65. (MIRA 18:11)

L 02522-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/IG/HM/EM

ACC NR: AT6022514 SOURCE CODE: UR/2787/65/000/010/0117/0156

AUTHOR: Mel'nikov, N. P. (Doctor of technical sciences, Professor); Dovzhenko, A. S. (Candidate of technical sciences); Tomling, Yu. R. (Engineer) 58 55 B+1

ORG: None

TITLE: Experimental study of the static strength of thick welded vessel elements during transition to a state of brittle fracture

SOURCE: Moscow. Gosudarstvennyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov. Materialy po metallicheskim konstruktsiyam, no. 10, 1965, 117-156

TOPIC TAGS: static load test, stress analysis, stress concentration, shear strength, weld evaluation

ABSTRACT: The authors study the static strength of thick welded vessel elements under conditions of transition into a brittle fracture state. The work is divided into two sections: the first section is concerned with the study of the linear stressed state while the second is devoted to the plane stressed state. Three series of tests were performed: 1. testing thick plates made of base metal, and welded joints at normal and below-zero temperatures; 2. testing thick plates reinforced with circular ribs at openings; 3. testing a thick plate with four holes at

Card 1/2

L 02522-67

ACC NR: AT6022514

3

normal, elevated and below-zero temperatures. All of the tests are concerned with the first section of this study. The test data are compared for the thick-plate specimens which were subjected to axisymmetric stretching. A table is given showing the basic mechanical strength characteristics such as stress concentration factors, types of failure and values of residual deformation. These are given in the order of their static testing. These data show that stress deformation curves for thick welded plate specimens subjected to axisymmetric stretching deviate from the stretching curve of standard specimens and for thick-plate specimens made from the base metal. Three types of failure were observed in axisymmetric stretching of thick-plate and welded joints: ductile fracture due to shear; ductile-brittle failure due to shear and tearing; nearly brittle or pure failure is a particular type of brittle failure caused by tearing. These tests make it possible to produce thick-walled vessels with welded-in branch pipes which are capable of withstanding the transition of the structural elements from ductile to brittle failure. It is shown that the nature of the linear stressed state significantly aids the working conditions of thick plates as compared to the plane stressed state. This makes it necessary to withhold final conclusions until such elements have been studied with respect to the plane stressed state. Orig. art. has: 22 figures, 2 tables.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 007

Card 2/2 egh

ACC NR: AM5027784 (A) Monograph UR/

Mel'nikov, Nikolay Prokof'yevich (Doctor of Technical Sciences; Professor)

Development of metal construction (Razvitiye metallicheskikh konstruktsiy) Moscow, Stroyizdat, 65. 0278 p. illus.,,biblio. Errata slip inserted. 4,500 copies printed.

TOPIC TAGS: structural steel, aluminum alloy, general construction, structural engineering, fabricated structural metal, metal

PURPOSE AND COVERAGE: This book covers the development of metal construction in different fields of industry and building. An analysis is made of the problems in designing, producing and assemblying metal constructions for different purposes including industrial and public buildings, special installations, special capacities, high equipment and other purposes. Attention is given to the design and perfecting of optimal construction forms fulfilling practical requirements while also decreasing metal consumption, reducing work load and time of production and assemblying. From an analysis of new designs for steel construction using increased supports with equipment, proposals for introducing more effective construction forms are given. From studies made of aspects of production in Soviet and foreign industries of aluminum alloys, recommendations are made for the use of aluminum alloys for special construction purposes. Main trends in present metal construction are evaluated, and means for continuing its development are pointed out. This book is recommended for a wide group of specialists designing and studying buildings and installations with support metal

Card 1/2 UDC:624.014

ACC NR: AM5027784

constructions as well as for specialists, mechanics and technicians in related fields of science and technology. The book is useful for teachers and students of these specialties.

TABLE OF CONTENTS (abridged):

SUB CODE: 13, 11 SUBM DATE: 26Mar65/ ORIG REF: 055/ OTH REF: 007

Card 2/2

MEL'NIKOV, N.S.

Replacement of osteomyelitic cavities of the leg by muscle flaps. Ortop.travm. i protez. no.5:75-76 S-O '56. (MLRA 9:12)

1. Yaroslavskiy oblastnoy gospital' (nach. - G.Ye.Lopatukhin) dlya invalidov Otechestvennoy voyny.

(OSTEOMYELITIS, surgery
muscle flap transpl. in leg)
(LEG, diseases
osteomyelitis, surg., muscle flap transpl.)
(MUSCLES, transplantation
flap transpl. in osteomyelitis of leg)

MEL'NIKOV, M.S.

Treatment of neurotrophic ulcers and its late results. Ortop. travm. i protez. 17 no.6:101-102 N-D '56. (MLRA 10:2)

1. Iz Yaroslavskogo oblastnogo gospitalya dlya invalidov Otechestvennoy voyny (nachal'nik - G.Ye.Lopatukhin)
(NERVES--DISEASES) (ULCERS)

MEL'NIKOV, N.V., akademik; ZENKIS, Ya.S., doktor ekonom. nauk

Means for constructing fuel and power balance of the U.S.S.R.
Teploenergetika 11 no.3:2-6 Mr '64. (MIRA 17:6)

1. Gosudarstvennyy komitet po toplivnoy promyshlennosti pri Gosplane SSSR.

MEL'NIKOV, N. V. Doc Tech Sci

Dissertation: "Basic Problems of Open-Pit Coal Mining in the USSR". 24/11/50

Inst of Mining, Acad Sci USSR

SO Vecheryaya Moskva
Sum 71

MEL'NIKOV, N. V.

Systems of open-pit mining of coal deposits. Moskva, Ugletekhizdat, 1952. 23 p.
(54-17587)

TN291.M39

MEL'NIKOV, N.V.

Manual for engineers and technicians in open-pit mining. Izd. 2., perer. i dop. Moskva, Ugletekhizdat, 1952. 455 p. (53-16764 rev)

TN291.M4 1952

MEL'NIKOV, N.V., Dr.

Mining Engineering

Subject matter and tasks of mining engineering. Gor. zhur. no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952 UNCLASSIFIED.

MEL'NIKOV, N.V., professor, doktor tekhnicheskikh nauk; BYKHOVSKAYA, S.N., redaktor; SIMKIN, B.A., redaktor; PROZOROVSKAYA, V.L., tekhnicheskiy redaktor.

[Drilling small and large boreholes in open-pit mining] Burenie skvazhin i shpurov na otkrytykh razrabotkakh. Moskva, Ugletekhizdat, 1953. 108 p. (MLRA 8:5)
(Boring)

MEL'NIKOV, N.V., professor, doktor tekhnicheskikh nauk; ORLOV, Ye.I., redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor; PROZOROVSKAYA, V.L., tekhnicheskiy redaktor.

[Theory and practice of drilling and blasting in the mining industry; collected transactions of the conference on drilling and blasting] Teoriia i praktika buro-vzryvnykh rabot v gornoi promyshlennosti; sbornik trudov soveshchaniia po buro-vzryvnym rabotam. Moskva, Ugletekhizdat, 1953. 258 p. (MLRA 8:5)
(Boring) (Blasting)

MEL'NIKOV, N.V., professor, doktor tekhnicheskikh nauk, laureat Stalinskoy premii.

Tasks in developing strip mining of coal. Mekh.trud.rab. 7 no.8:11-17 Ag '53. (MLRA 6:8)
(Strip mining)

MEL'NIKOV, N.V., laureat Stalinskoy premii, professor.

Organizing work in coal pits in accordance with technological schedules. Ugol' 28 no.6:22-25 Je '53. (MLRA 6:6)
(Coal mines and mining)

MEL'NIKOV, N.V., professor, doktor tekhnicheskikh nauk; SIMKIN, B.A., otvetstvennyy redaktor; YAGURNOV, G.P., redaktor; IL'INSKAYA, G.M., tekhnicheskiy redaktor.

[Mechanization of dumping operations in open pit mining] Mekhanizatsiia otval'nykh rabot na otkrytykh razrabotkakh. Moskva, Ugletekhizdat, 1954. 71 p. (MLRA 7:11)
(Mining engineering)

MEL'NIKOV, N.V.; SIMKIN, B.A., kandidat tekhnicheskikh nauk.

New techniques for open working of coal deposits. Mekh.trud.rab. 9 no.11:25-28 N '55. (MLRA 9:2)

1.Chlen-korrespondent AN SSSR (for Mel'nikov)
(Coal mines and mining)

MEL'NIKOV, N.V.

USSR/ Minerals - Open-pit mining

Card 1/1 Pub. 124 - 4/30

Authors : Mel'nikov, N. V., Memb. Corresp., Acad. of Sc., USSR

Title : Open-pit mineral mining method

Periodical : Vest. AN SSSR 25/7, 23 - 28, Jul 1955

Abstract : The economical advantages derived through open-pit mining of minerals (coal, metallic and non-metallic ores, etc), are discussed. Mention is made that open-pit mining of coal is now employed in the coal regions of the Ural, Far East, Krasnoyarsk region, Eastern Siberia, Kuznetsk and Karaganda coal basins. The yields obtained through open-pit mining are listed.

Institution : .....

Submitted : .....

NIKONOV, German Pavlovich; MEL'NIKOV, N.V., redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor.

[Hydromechanization of open-cut mining work] Opyt gidromekhanizatsii otkrytykh gornykh rabot. Pod red. N.V.Mel'nikova. Moskva, Ugletekhizdat, 1956. 62 p. (MLRA 9:6)

1.Chlen-korrespondent AN SSSR (for Mel'nikov).
(Hydraulic mining)

SPIVAKOVSKIY, A.O.; MEL'NIKOV, N.V.; YEVNEVICH, A.V.; TOPCHIYEV, A.V.; LAPOVENKO, N.A.; BESPALOV, B.F., otvetstvennyy redaktor; KANASKOVA, I.P., tekhnicheskiy redaktor

[Equipment for mine transportation, an album of designs] Oborudovanie rudnichnogo transporta; atlas konstruktsii. Moskva, Ugletekhizdat. Pt.2. [Haulage in open-cut mining] Transport na otkrytykh razrabotkakh. 1956. 167 p. (MLRA 10:3)
(Mine haulage)

MEL'NIKOV, N.V., professor, otvetstvennyy redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor

[Open-cut mining in foreign countries] Tekhnika otkrytykh gornykh rabot zz rubezhom. Moskva, Ugletekhizdat, 1956. 283 p. (MLRA 9:7) [Microfilm]

1. Chlen-korrespondent AN SSSR (for Mel'nikov) (Coal mines and mining) (Strip mining)

MEL'NIKOV, Nikolay Vasil'yevich, professor, doktor tekhnicheskikh nauk; ZAPREYEVA, K.A., redaktor izdatel'stva; KOROVENKOVA, Z.A., tekhnicheskiy redaktor

[A manual for engineers and technicians concerning open-pit mining] Spravochnik inzhenera i tekhnika po otkrytym gornym rabotam. Izd. 3-e, perer. i dop. Moskva, Ugletekhizdat, 1956. 704 p. (MLRA 10:1)
(Coal mines and mining)

MELNIKOV, N.V.

3507. WINNING OF COAL WITH AUGERS AND MINING RIGS IN OPENCAST WORKINGS. Melnikov, N.V. and Simkin, B.A. (Ugol (Coal, Moscow), Dec. 1956, 25-31). When seams are too thin for it to be economical to remove the overburden, they can be mined by excavating a trench and boring into them from it. Such conditions obtain in Kuzbass, East Siberia and possibly in the Moscow Region and Karaganda fields. The method is explained with diagrams and brief particulars are given for the Soviet SMTF-1 auger to be designed for the purpose. Particulars are also given of three U.S. augers and of the Carbide and Chemical Co.'s mining rig which cuts 305 m into the seam, against 60-80 m for an auger. (See Min. Congr. J., Wash., Nov. 1956, vol. 38, 60-63). It has been suggested that the coal left between auger holes could be used for underground gasification. 10 million tons/year of coal could be won with augers in South Kuzbass alone in the next three years. (L).

MEL'NIKOV, N.V.; ANDREYEV, A.V.

Geological structure of the district located west and southwest of Ladyzhenka and of adjacent areas in the Tengis Depression based on data obtained from drilling and mapping structural regions. Avtoref. nauch. trud. VNIGRI no.17:191-192 '56. (MIRA 11:6)
(Kazakhstan--Geology, Structural)

Mel'nikov, N. V.

USSR/ Mining - Conferences

Card 1/1 Pub. 124 - 27/39

Authors : Mel'nikov, N. V., Memb. Corres., Acad. of Sc., USSR, and Merchenko, L. N., Cand. of Tech. Sc.

Title : Theory of the demolition of rocks through explosion

Periodical : Vest. AN SSSR 26/2, 123-124, Feb 1956

Abstract : Minutes are presented from the conference held at the Mining Inst. of the Acad. of Sc., USSR where lectures were held on the theory of rock destruction through explosion.

Institution : .....

Submitted : .....

MEL'NIKOV, Nikolay Vasil'yevich, prof.; SLAVOROSOV, A.Kh., r i.; SABITOV, A., tekhn.red.

[Development of open-cut coal mining in the U.S.S.R.] Razvitie otkrytoi ugledobychi v SSSR. Moskva, Ugletekhizdat, 1957. 46 p. (MIRA 11:5)
(Strip mining)
(Coal mines and mining)

TYMOVSKIY, Leonid Georgiyevich; MEL'NIKOV, N.V., professor, retsenzent; YERSHOV, A.S. retsenzent; GRAUDIN, E.K., retsenzent; SHESHKO, Ye.F., professor, doktor tekhnicheskikh nauk, redaktor; YEZDOKOVA, M.L., redaktor izdatel'stva; EVERSON, I.M., tekhnicheskiy redaktor

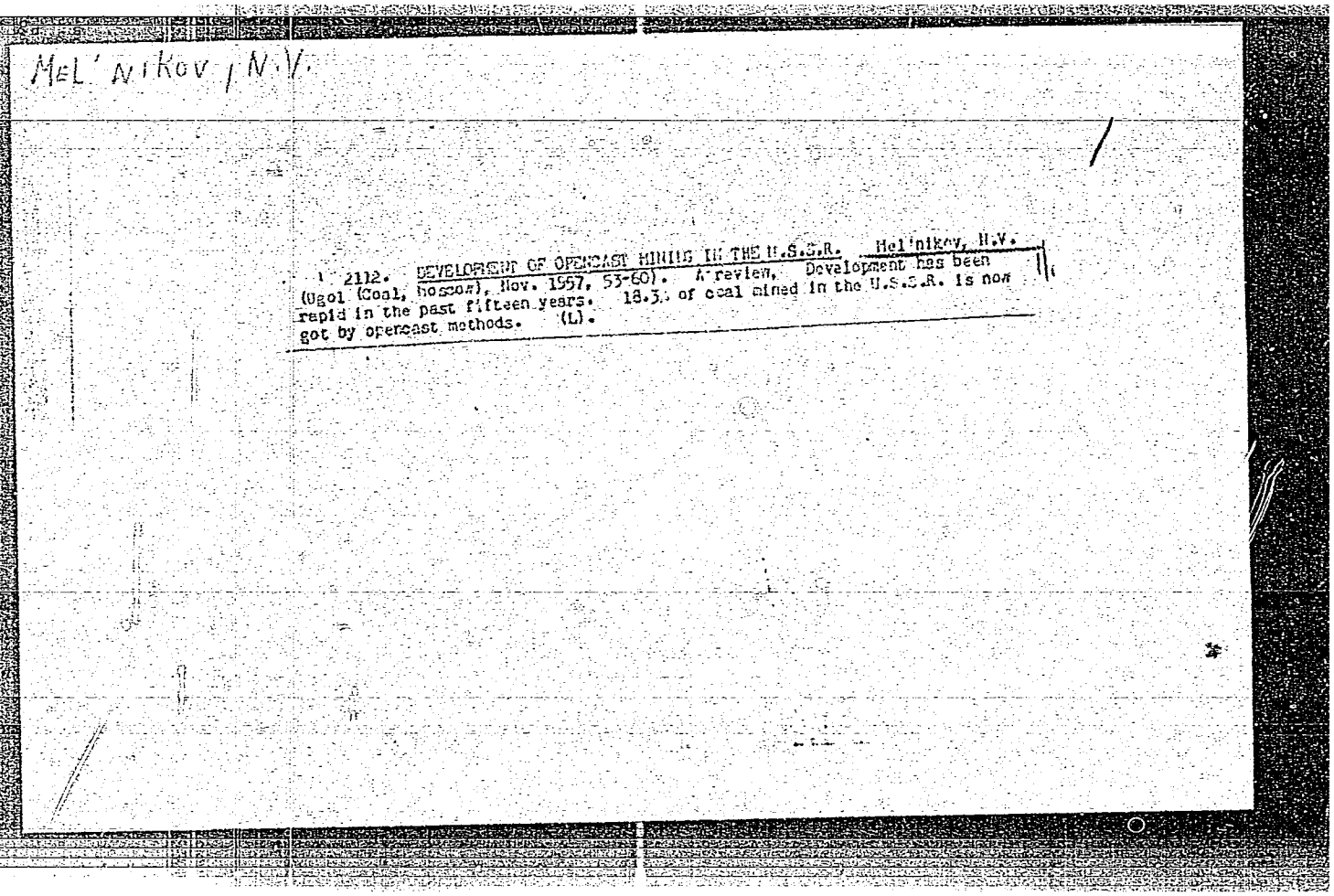
[Bline winzes in deep pits] Tupikovye s"ezdy v glubokikh kar'erakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 79 p. (MLRA 10:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Mel'nikov). 2. Nachal'nik otdela transporta i genplanov Instituta Giproruda (for Yershov). 3. Glavnyy tekhnolog gornogo otdela Instituta Giproruda (for Graudin)
(Strip mining)

MEL'NIKOV, Nikolay Vasil'yevich; OKHRIMENKO, V.A., redaktor izdatel'stva; ZAZUL'SKAYA, V.F., tekhnicheskiy redaktor

[Development of mining science in Soviet strip mining] Razvitie gornoi nauki v oblasti otkrytoi razrabotki mestorozhdenii v SSSR. Moskva, Ugletekhizdat, 1957. 91 p. (MLRA 10:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Mel'nikov)
(Strip mining)



MEL'NIKOV, N.V.

2112. DEVELOPMENT OF OPENCAST MINING IN THE U.S.S.R. Mel'nikov, N.V. (Ugol (Coal, Moscow), Nov. 1957, 53-60). A review. Development has been rapid in the past fifteen years. 18.3% of coal mined in the U.S.S.R. is now got by opencast methods. (L).

MEL'NIKOV, N.V.

SUBJECT: USSR/Mining

127-10-13/24

AUTHORS: Mel'nikov, N.V., Corresponding Member, USSR Academy of Sciences; and Chesnokov, M.M. Candidate of Technical Sciences.

TITLE: Safety Problems in Open Mines (Voprosy bezopasnosti na otkrytykh razrabotkakh)

PERIODICAL: Gornyy Zhurnal, 1957, #10, pp 56-60 (USSR)

ABSTRACT: The author analyses statistics of traumatic injuries in mines of some western countries and states that the number of accidents in open mines is considerably lower than in underground mining.

Not citing any definite figures about traumatic injuries in the USSR, the author mentions that fatal injuries occur in the open mines of all branches of industry, and most of them occur in the open mines of the coal and metallurgical industries.

About 75 % of all fatal accidents happened because of the violation of safety regulations, 15.1 % were due to cave-ins and falling of coal, ore or rock lumps, and 8.6% were due to faulty tools, etc.

Card 1/2

MEL'NIKOV, N.V.; SIMKIN, B.A., kand. tekhn. nauk.

Cutting thin layers in open pit coal mining. Mekh. trud. rab. 11 no.12:33-38 D '57. (MIRA 11:3)

1. Chlen-korrespondent AN SSSR (for Mel'nikov).
(Coal mines and mining--Equipment and supplies)
(Coal mining machinery)

MEL'NIKOV, N.V.,

MEL'NIKOV, N.V., prof.

Development of open pit coal mining in the U.S.S.R. Ugol' 32 no.11:53-60 N '57. (MIRA 10:12)

1. Chlen-korrespondent AN SSSR.
(Strip mining) (Coal mines and mining)

MEL'NIKOV, N.V., inzhener.

Rolling friction bearings with axial displacement used in the running wheels of bridge cranes. Vest.mash.37 no.1:22-23 Ja '57. (MLRA 10:2)
(Cranes, derricks, etc.)

MEL'NIKOV, N.V., prof., otvetstvennyy red.; OKHRIMENKO, V.A., red. izd-va; ZHUKOV, V.V., red. izd-va; IL'INSKAYA, G.M., tekhn. red.; PROZOROVSKAYA, V.L., tekhn. red.

[Open-pit mining of coal deposits in the U.S.S.R.] Razrabotka ugol'nykh mestorozhdenii SSSR otkrytym sposobom. Moskva, Ugletekhizdat, 1958. 351 p. (MIRA 11:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Mel'nikov).
(Coal mines and mining)

ATAULIN, V.V.; VLASOVA, R.M.; DAVYDOVA, Ye.A.; DANILENKO, I.S.; DZIOV, V.A.; DUBROVIN, A.P.; YEFANOVA, L.V.; KARPENKO, L.V.; KLEPIKOV, L.N.; KOTRELEV, S.V.; LUK'YANOV, N.I.; MEL'NIKOV, N.V., prof., obshchiy red.; MKRTYCHAN, A.A.; NEMTINOV, A.M.; POGOSYANTS, V.K.; SEMIZ, M.D.; SKOBLO, G.I.; SLOBODCHIKOV, P.I.; SMIRNOV, V.M.; SUSHCHENKO, A.A.; SOKOLOVSKIY, M.M.; TRET'YAKOV, K.M.; FISH, Ye.A.; TSOY, A.G.; TSYPKIN, V.S.; CHEKHOVSKOY, P.A.; CHIZHIKOV, V.I.; ZHUKOV, V.V., red.izd-va; KOROVENKOVA, Z.L., tekhn.red.; PROZOROVSKAYA, V.L., tekhn.red.

[Prospects for the open-pit mining of coal in the U.S.S.R.; studies and analysis of mining and geological conditions and technical and economic indices for open-pit mining of coal deposits] Perspektivy otkrytoi dobychi uglia v SSSR; issledovanie i analiz gornogeologicheskikh uslovii i tekhniko-ekonomicheskikh pokazatelei otkrytoi razrabotki ugol'nykh mestorozhdenii. Pod obshchei red. N.V.Mel'nikova. Moskva, Ugletekhizdat, 1958. 593 p. (MIRA 11:12)

1. Vsesoyuznyy tsentral'nyy gosudarstvennyy proyektnyy institut "Tsentrogiproshakht." 2. Chlen-korrespondent AN SSSR (for Mel'nikov).

(Coal mines and mining)